The invention claimed is:

~~CLAIMS:~~

1. A method of image compression comprising:

(a) dividing an image to be compressed into a plurality of image blocks;

(b) carrying out a two-dimensional block transform on each block to produce a corresponding plurality of coefficient blocks;

(c) bitwise digitizing the coefficients within each coefficient block to define a plurality of bit planes for each coefficient block;

(d) defining a group of one or more consecutive bit planes starting with the most significant bit plane;

(e) selecting those coefficients which first become significant within the group;

(f) flagging the said selected coefficients;

(g) transmitting information representative of the positions of the said selected coefficients; and transmitting the bits within the group of the said coefficients; and

(h) repeating (d) to (g) one or more times, with each new group starting with the most significant bit plane not previously dealt with; and, at each repeated pass, also transmitting the bits within the current group of those coefficients which were previously flagged on an earlier pass.

2. A method as claimed in Claim 1 in which step (g) is carried out across the entire image to be compressed.

3. A method as claimed in Claim 1 in which step (g) is separately repeated for each image block.

4. A method as claimed in ~~any one of Claims 1 to 3~~ claim 1 in which the block transform is the two-dimensional Discrete Cosine Transform.

5. A method as claimed in ~~any one of Claims 1 to 3~~ claim 1 in which the block transform is the Lapped Orthogonal Transform.

6. A method as claimed in ~~any one of Claims 1 to 3~~ claim 1 in which the block transform is the Fast Fourier Transform.

7. A method as claimed in ~~any one of the preceding claims~~ claim 1 further including, at ~~step (g)~~ step (f), transmitting mask information representative of a binary mask which defines the positions of the said selected coefficients.

8. A method as claimed in Claim 7 in which the binary mask defines the positions of the selected coefficients within each coefficient block in JPEG zig-zag order.

9. A method as claimed in Claim 7 or ~~Claim 8~~ in which the binary mask is associated with a mask length code to define the mask end point.

10. A method as claimed in ~~any one of Claims 7 to 9~~ claim 7 in which the binary mask is associated with a stop-code to define the mask end point.

11. A method as claimed in ~~any one of Claims 7 to 10~~ claim 7 in which transmitted mask information is an entropy-coded version of the mask.

12. A method as claimed in Claim 11 in which the transmitted mask information is an arithmetic coded version of the mask.

13. A method as claimed in Claim 11 in which the transmitted mask information is a Huffman coded version of the mask.

14. A method as claimed in ~~any one of Claims 7 to 13~~ claim 7 in which the transmitted mask is run length coded.

15. A method as claimed in Claim 9 when dependent upon Claim 8 in which the mask length code defines the mask end point zig-zag address.

16. A method as claimed in Claim 9 when dependent upon Claim 8 in which the mask length code defines the Manhattan distance from a DC term to the mask end point.

17. A coder for encoding images, comprising:

(a) means for dividing an image to be compressed into a plurality of image blocks;

(b) means for carrying out a two-dimensional block transform on each block to produce a corresponding plurality of coefficient blocks;

(c) means for bitwise digitizing the coefficients within each coefficient block to define a plurality of bit planes for each coefficient block;

(d) means for defining a group of one or more consecutive bit planes starting with the most significant bit plane;

(e) means for selecting those coefficients which first become significant within the group;

(f) means for flagging the said selected coefficients;

(g) means for transmitting information representative of the positions of the said selected coefficients, and for transmitting the bits within the group of the said coefficients; and

(h) means for repeating (d) to (g) one or more times, with each new group starting with the most significant bit plane not previously dealt with, and means for transmitting, at each repeated pass, the bits within the current group of those coefficients which were previously flagged on an earlier pass.

18. A coder as claimed in Claim 17 in which the means for transmitting information representative of the positions of the said selected coefficients comprise binary mask means.

19. A coder as claimed in Claim 18 including means for transmitting, as ~~synchronised~~ synchronized data streams, the coefficient bits and mask information.

20. A video coder/decoder including a coder as claimed in Claim 17 and an associated decoder, the decoder being arranged to maintain a running record, as transmission between the coder and the decoder proceeds, of the coefficients which are currently significant.

21. A method as claimed in any one of Claims 1 to 16 including the transmission of information representative of a binary off-mask for defining the

positions of coefficients whose bits are no longer required to be sent.